



## REASSESSMENT OF THE RESPONSE TO TSB RECOMMENDATION M08-04

### Design and construction of fishing vessels operating in ice

#### Background

On the morning of 29 March 2008, the small fishing vessel *L'Acadien II*, with six crew members on board, capsized 18 nautical miles off Cape Breton Island, Nova Scotia, while being towed in ice by the light icebreaker CCGS *Sir William Alexander*. Two crew members were quickly rescued by another small fishing vessel. Several hours later, three deceased crew members were recovered from the overturned vessel by Department of National Defence search-and-rescue technicians. One crew member is still missing and presumed dead.

The Board issued the safety recommendation on 26 November 2008.

#### TSB Recommendation M08-04 (November 2008)

In 2005, there were approximately 1800 vessels participating in the seal hunt, all of them under 19.81 m. Based on licensing information from 2007, a similar number of vessels are estimated to have participated during the 2008 season. Typically, these vessels are neither designed nor constructed for operating in ice. Intended for open-water fishing and outfitted temporarily for participation in the hunt, their hulls, shafts, propellers, and rudders are seldom strengthened for navigation in ice-infested waters. In addition, without sufficient power and mass to navigate in ice, these vessels are susceptible to being beset and damaged.

The Board is encouraged that Transport Canada is undertaking public consultations as it drafts the new Fishing Vessel Safety Regulations and the Construction Standards for Commercial Fishing Vessels. New fishing vessels over nine metres in length that operate in ice will be required to be suitably designed and constructed. However, the Board is concerned that this will not include all existing vessels; in 2005, for example, 58 per cent of vessels involved in the seal hunt were less than 10.7 m.

Given that these existing vessels are likely to make up the majority of the sealing industry, the current risk level will persist. The Board therefore recommends that:

The Department of Transport include in the proposed Fishing Vessel Safety Regulations adequate measures to ensure that all fishing vessels operating in ice – including those participating in the seal hunt – are structurally suited for their operating environment.

**TSB Recommendation M08-04**

## **Transport Canada's response to Recommendation M08-04 (February 2009)**

In its 24 February 2009 letter, the Minister of Transport, Infrastructure, and Communities agreed with the general intent of the recommendation.

The response noted that the responsibility for safe construction and operation of a vessel is incumbent upon the designer and/or builder and ultimately on the owner and/or master of the vessel. Operating in ice-covered waters requires prudence, and going astern in heavy ice is a specialized operation.

The response indicated that Transport Canada is developing new Fishing Vessel Safety Regulations that will include revised provisions for fishing vessels that may navigate in ice-covered waters. The provisions related to vessel structure will apply to new and modified vessels. They will also apply, based on risk, and where reasonable and practicable, to existing vessels. These provisions, which are expected to be published in the *Canada Gazette*, Part I by spring 2010, will apply to vessels that are over 9m in length.

In a follow-up meeting, Transport Canada (TC) advised that new Fishing Vessel Safety Regulations that will now include provisions that apply to vessels less than 9 m that may navigate in ice-covered waters. A public consultation information paper on the draft Fishing Vessel Safety Regulations, which apply to fishing vessels less than 24 m, and a consultation document on the *Construction Standards for Small Vessels*, TP 1332, were made available at the national meeting of the Canadian Marine Advisory Council held in April 2009. The information paper stated that a fishing vessel shall not embark on any voyage into ice-covered waters unless the hull of the vessel has been designed or adequately strengthened to resist damage from anticipated conditions. Existing vessels shall meet the design and construction requirements set out in TP 1332, as is reasonable and practical to do so. The consultation document on TP 1332 stated that the hull of vessels shall be strengthened if the vessel is intended for operation in waters where the presence of ice requires the vessel to make extraordinary manoeuvres in order to avoid hull damage.

## **TSB assessment of response to Recommendation M08-04 (June 2009)**

The new proposed Fishing Vessel Safety Regulations will include provisions relating to the structure of fishing vessels less than 24 m in length that navigate in ice-covered waters. However, existing fishing vessels, many of which are less than 15 gross tonnage and would have not been previously inspected, are only required to comply where it is reasonable and practical to do so. TC has indicated that the "reasonable and practical" provisions may be applied following a risk-based assessment on a case-by-case basis. However, if the owner of the vessel can demonstrate that the costs of the modifications are such that it is unreasonable and impracticable to modify the vessel, the Minister may take measures such as placing operating restrictions on the vessel. While new vessels will benefit from the provisions of the proposed regulations, the risk associated with existing vessels may be substantially reduced if hazards are properly identified, risks are adequately assessed and corrective actions, such as modification and hull strengthening, are made to these vessels.

Therefore the response to the recommendation is **Satisfactory Intent**.

### **Transport Canada's response to Recommendation M08-04 (March 2010)**

TC's update, dated March 2010, indicated that TC is developing new Fishing Vessel Safety Regulations that include revised provisions for fishing vessels that may navigate in ice-covered waters. The provisions related to vessel structure will apply to new and/or modified vessels as reasonable and practicable based on risk. These provisions apply to vessels that are over 9 m in length.

The proposed new Fishing Vessel Safety Regulations are anticipated to be pre-published in the *Canada Gazette*, Part I in the fourth quarter of 2011.

### **TSB reassessment of response to Recommendation M08-04 (March 2010)**

If the action proposed by TC is implemented fully and "reasonable and practical" provisions are applied following a risk-based assessment on a case-by-case basis, the risk associated with existing vessels may be substantially reduced.

Therefore, the assessment of the response remains **Satisfactory Intent**.

### **Transport Canada's response to Recommendation M08-04 (December 2010)**

TC's update, dated December 2010 indicated that they are developing new Fishing Vessel Safety Regulations that include revised provisions for fishing vessels that may navigate in ice-covered waters. The provisions related to vessel structure will apply to new and/or modified vessels and to existing vessels as reasonable and practicable based on risk. These provisions apply to vessels that are over 9 m in length. The proposed new Fishing Vessel Safety Regulations are anticipated to be pre-published in the *Canada Gazette*, Part I in the second quarter of 2012.

### **TSB reassessment of response to Recommendation M08-04 (March 2011)**

Where it is not practical to make modifications, existing vessels may be grandfathered from these requirements. Furthermore, a total of 6195 registered fishing vessels less than 9 m in length are exempt. However, if the action proposed by TC is implemented fully and "reasonable and practical" provisions are applied following a risk-based assessment on a case-by-case basis, the risk associated with existing vessels may be substantially reduced.

Therefore, the assessment of the response remains **Satisfactory Intent**.

### **Transport Canada's response to Recommendation M08-04 (December 2011)**

TC's proposed Fishing Vessel Safety Regulations include revised provisions for fishing vessels that may navigate in ice-covered waters. The provisions are related to vessel structure and will apply to new and/or modified vessels and to existing vessels as reasonable and practicable based on risk. These provisions apply only to vessels that are over 9 metres in length.

These regulations will also cover certain requirements for operating environments.

The proposed new Fishing Vessel Safety Regulations are anticipated to be published in the *Canada Gazette*, Part II in the 2nd Quarter of 2013.

The TC response was part of a government action plan introduced following the *L'Acadien II* accident which included safe operational measures to be taken by vessel owners and by DFO-CCG policy which was introduced last year.

### **TSB reassessment of response to Recommendation M08-04 (March 2012)**

Where it is not practical to make modifications, existing vessels can be grandfathered from these requirements. Additionally, more than 6000 registered fishing vessels will be exempt from the proposed Fishing Vessel Safety Regulations as they are less than 9 m.

However, vessels less than 9 m are required to comply with the *Small Vessel Regulations* and the *Construction Standards for Small Vessels*, TP 1332 that state that “the hull of a vessel (other than a pleasure craft) operating in ice covered waters, where the presence of ice requires that the vessel make extraordinary manoeuvres to avoid hull damage, shall be strengthened.” This requires operator analysis that can only be conducted retroactively, once the vessel has already operated in ice. The proposed *Fishing Vessel Regulations* will incorporate TP 1332 by reference.

Therefore, the risks associated with fishing vessel operation in ice covered waters will be reduced but will not be substantially reduced through the implementation of the proposed *Fishing Vessel Regulations*. TC’s proposed actions will allow for some fishing vessels with un-strengthened hulls to continue operating in ice, particularly those fishing vessels that are active during the seal hunt.

The assessment of the response is considered **Satisfactory in Part**.

### **Transport Canada’s response to Recommendation M08-04 (December 2012)**

In consideration of the clarifications and information provided below, Transport Canada believes that the status should be restored to Satisfactory Intent pending completion of the new regulations.

Transport Canada is developing proposed new Fishing Vessel Safety Regulations that include revised provisions for fishing vessels that may navigate in ice-covered waters. The provisions related to vessel structure will apply to new and/or modified vessels and to existing vessels. These provisions apply to all fishing vessels.

Fishing vessels less than 9 m are not exempt: they are required to comply with the *Small Vessel Regulations* that require vessels (other than a pleasure craft) to be strengthened if the vessel is intended for operation in waters where the presence of ice requires the vessel to make extraordinary manoeuvres in order to avoid hull damage. In both regulations, existing vessels are not grandfathered. Critical safety elements such as structural strength must meet or demonstrate an equivalent level of safety.

The proposed new Fishing Vessel Safety Regulations are anticipated to be pre-published in the *Canada Gazette*, Part I in the 1st quarter of 2014.

The vessel design and construction structural strength requirement is contingent upon the intended use, taking into account the maximum anticipated loads. Operation of a vessel in conditions where loads are higher than anticipated or exceed maximums due to misuse or unexpected external factors such as exceptional environmental conditions, inadequate

operational support or other factors is the responsibility of the authorized representative and the master of the vessel.

The *Canada Shipping Act, 2001*, section 106, makes the authorized representative of the vessel responsible for developing procedures for the safe operation of the vessel and in section 109 the master of the vessel responsible for taking all reasonable steps to ensure the safety of the vessel and of persons who are on board or are loading or unloading it while using equipment on it.

The issue at the origin of this recommendation should not only be addressed by structural requirements but also through proper vessel operation in ice-covered waters. The TC response was part of a government action plan introduced following the accident that included safe operational measures to be taken by owners and DFO-CCG policy regarding the provision of icebreaking support. Vessel towing policy and management of the seal fishery therefore should be assessed in unison with the recommendations and measures taken by DFO-CCG. The *2011-2015 Integrated Fisheries Management Plan for Atlantic Seals* indicates a downward trend and drastic reduction in sealing activity since the time of the report and the previous referenced report.

In 2010, approximately 390 people participated in the Atlantic Canada Seal harvest. This number is down significantly from 2009 which reported 1,755 active participants. Similarly, the number of active vessels in 2010 dropped to 106, from 540 active vessels the previous year.

### **TSB reassessment of response to Recommendation M08-04 (March 2013)**

TSB recognizes that the risk associated with operating small fishing vessels in ice is reduced as the number of operational vessels is reduced. The TSB also recognizes the following actions meant to respond to the recommendation:

- TC is developing proposed new Fishing Vessel Safety Regulations that include revised provisions for fishing vessels that may navigate in ice-covered waters.
- Vessels not covered by Fishing Vessel Safety Regulations are governed by the *Small Vessel Regulations*.
- Both new and existing vessels must abide by the construction provisions governing fishing vessels that may navigate in ice-covered waters.
- No fishing vessels are or will be grandfathered in either regulation.
- Authorized representatives (owners and operators) are delegated responsibility for recognizing the risks of navigating in ice-covered waters and for operating with due diligence.

Therefore, the assessment of the response has been restored to **Satisfactory Intent**.

### **Transport Canada's response to Recommendation M08-04 (November 2013)**

In November 2013, Transport Canada indicated that they are developing proposed new Fishing Vessel Safety Regulations.

Phase 1 of the proposed Regulations include revised provisions for fishing vessels that may navigate in ice-covered waters. The provisions related to vessel structure will apply to new and/or modified vessels and to existing vessels. These provisions apply to all fishing vessels.

Fishing Vessels less than 9 m are not exempt, they are required to comply with the *Small Vessel Regulations* that require vessels (other than a pleasure craft) to be strengthened if the vessel is intended for operation in waters where the presence of ice requires the vessel to make extraordinary maneuvers in order to avoid hull damage. In both regulations, existing vessels are not grandfathered. Critical safety elements such as structural strength must meet or demonstrate an equivalent level of safety.

Phase 1 of the proposed new *Fishing Vessel Safety Regulations* are anticipated to be pre-published in *The Canada Gazette, Part I*, in the 2nd quarter of 2014. Completion of Phase 1 should achieve the close out of this recommendation.

Vessel design and construction structural strength requirement is contingent upon the intended use, taking into account the maximum anticipated loads. Operation of a vessel in conditions where loads are higher than anticipated or exceed maximums due to misuse or unexpected external factors such as exceptional environmental conditions, inadequate operational support or other factors is the responsibility of the Authorized Representative and the Master of the vessel.

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### **TSB reassessment of response to Recommendation M08-04 (March 2014)**

It has been over 5 years since the TSB issued this recommendation. TC’s response provided no new substantive information or rationale for the protracted delay in promulgating these new regulations.

Given that the proposed new Fishing Vessel Safety Regulations are now anticipated to be pre-published in the *Canada Gazette, Part I* in the 2nd quarter of 2014, the assessment of the response remains **Satisfactory Intent**.

## Transport Canada's response to Recommendation M08-04 (December 2014)

Transport Canada's response reiterated the information provided in its response of November 2013 that related to responsibilities of the Authorized Representative and owner of the vessel pursuant to the *Canada Shipping Act, 2001*, and the taking into consideration the various operational measures such as icebreaking, towing, and management of the seal fishery. The response also indicated:

Transport Canada is developing the proposed *Fishing Vessel Safety Regulations*. Phase 1 of the proposed regulations include revised provisions for fishing vessels that may navigate in ice-covered waters. The provisions related to vessel structure will apply to new and/or modified vessels and to existing vessels. These provisions apply to all fishing vessels.

Fishing vessels less than 9 m are not exempt, as part of Phase 2 of the proposed new *Fishing Vessel Safety Regulations*, they will be required to comply with the *Small Vessel Regulations* that require vessels (other than a pleasure craft) to be strengthened if the vessel is intended for operation in waters where the presence of ice requires the vessel to make extraordinary maneuvers in order to avoid hull damage. In both regulations, existing vessels are not grandfathered. Critical safety elements such as structural strength must meet or demonstrate an equivalent level of safety.

Phase 1 of the proposed new *Fishing Vessel Safety Regulations* are anticipated to be pre-published in *The Canada Gazette, Part I*, in the 1<sup>st</sup> quarter of 2015. Completion of phase 1 should achieve the close out of this recommendation.

Phase 2, which will be developed after the completion of Phase 1, will involve repealing what is left of the *Small Fishing Vessel Inspection Regulations* and replacing them with what is currently Parts 2, 3, 4 of the proposed *Fishing Vessel Safety Regulations*. Phase 2 will bring the proposed construction requirements into force.

Vessel design and construction structural strength requirement is contingent upon the intended use, taking into account the maximum anticipated loads. Operation of a vessel in conditions where loads are higher than anticipated or exceed maximums due to misuse or unexpected external factors such as exceptional environmental conditions, inadequate operational support or other factors is the responsibility of the Authorized Representative and the Master of the vessel.

## TSB reassessment of response to Recommendation M08-04 (March 2015)

TC's 2014 response provided little new substantive information. Given that both new and existing vessels must abide by the construction provisions governing fishing vessels that may navigate in ice-covered waters, the risks associated with operating in ice will not be substantially reduced until the new *Fishing Vessel Safety Regulations* come into force.

In 2009, TC indicated that these regulations would be pre-published in the *Canada Gazette, Part I* in the spring of 2010. While the proposed measures are reasonable, the protracted delay is not reasonable.

The continued lack of progress in implementing the proposed measures now warrants changing the assessment rating to **Unsatisfactory**.

### **Transport Canada's response to Recommendation M08-04 (February 2016)**

Proposed amendments to regulations governing fishing vessels are expected to address TSB's concerns once all phases are implemented, as there will be requirements to address the operation of fishing vessels in ice-covered waters. Phase 1 will be published in the *Canada Gazette*, Part I as soon as possible. As soon as a definitive date of publication is confirmed, TC will advise TSB.

TSB was subsequently informed that the Regulations Amending the Small Fishing Vessel Inspection Regulations were pre-published in the *Canada Gazette*, Part I on 06 February 2016.

### **TSB reassessment of response to Recommendation M08-04 (March 2016)**

Phase 1 of the regulations amending the *Small Fishing Vessel Inspection Regulations* was published in the *Canada Gazette*, Part I on 06 February 2016. Phase 1 updates the current safety equipment, vessel stability requirements and introduces requirements for safe operating procedures for small fishing vessels. It is anticipated that Phase 2 will update the current construction requirements for small fishing vessels. TC has not indicated when Phase 2 of the amended regulations will be pre-published in the *Canada Gazette*. Until such time as the current construction standards are amended to ensure that fishing vessels are structurally suited for operating in ice, the risk associated with operating in ice environments will not be substantially reduced.

Given the prolonged delay in amending the regulations governing fishing vessels, the reassessment of this recommendation therefore remains **Unsatisfactory**.

### **Transport Canada's response to Recommendation M08-04 (December 2016)**

Phase 1 of the regulations amending the *Small Fishing Vessel Inspection Regulations* were published in the *Canada Gazette*, Part II on July 13, 2016 and will come into force one year after the publication date.

Phase 2 of the amendments to the regulations governing fishing vessels are expected to address TSB's concerns regarding the operation of fishing vessels in ice-covered waters. Phase 2 will update the current construction requirements of the *Small Fishing Vessel Inspection Regulations*.

### **TSB reassessment of response to Recommendation M08-04 (March 2017)**

The TSB acknowledges the recent drafting of Phase 2 of the new Small Fishing Vessel Inspection Regulations. The Board agrees that the new regulations, if implemented as currently drafted, should address the safety deficiency identified in the recommendation to ensure that small fishing vessels operating in ice are structurally suited for their operating environment.

However, due to the protracted delay in putting into force Phase 2 of the regulations governing fishing vessels, the reassessment of this recommendation remains **Unsatisfactory**.



### **Transport Canada's response to Recommendation M08-04 (December 2017)**

TC consulted with industry at the December 2017 National CMAC on the proposed construction requirements for Phase 2 of new Fishing Vessel Safety Regulations. Work is ongoing.

### **TSB reassessment of response to Recommendation M08-04 (February 2018)**

The Board is pleased to see that TC has undertaken an industry consultation. However, TC has not provided a detailed plan and any timeline for completing the final drafting of Phase 2 of the new Fishing Vessel Safety Regulations. It is also unclear if TC plans to make any substantive changes to the original draft as a result of the industry consultation. Therefore, the reassessment of this recommendation remains **Unsatisfactory**.

### **Transport Canada's response to Recommendation M08-04 (January 2019)**

Transport Canada agrees in principle with the recommendation. TC continued the consultation with stakeholders at the November 2018 National Canadian Marine Advisory Council (CMAC) meeting on the proposed construction requirements for Phase 2 of new *Fishing Vessel Safety Regulations* (FVSR). Work is ongoing to develop the regulatory requirements for construction and is targeted for pre-publication in the *Canada Gazette*, Part I, in June 2020.

Phase I of the FSVR (that entered into force in July 2017) already requires that the authorized representative ensure the vessel is designed, constructed and equipped to operate safely and be seaworthy in its area of operation. TC will issue specific guidance to its inspectors via FlagState.net in early 2019 to verify that the intent of this provision is met for fishing vessels operating in ice conditions.

TC therefore, suggests that this recommendation should be considered Satisfactory Intent.

### **TSB reassessment of response to Recommendation M08-04 (February 2019)**

The Board takes note that TC is developing the regulatory requirements for construction requirements for Phase 2 of the new *Fishing Vessel Safety Regulations* (FVSR) which are expected to be published in the *Canada Gazette*, Part I, in June 2020.

The Board also notes that TC will be providing specific guidance to its inspectors in 2019 to ensure that all fishing vessels operating in ice are structurally suited. However, the Board remains concerned about the protracted delay in Phase 2 of the new FVSR coming into force.

The response to this recommendation is considered to be **Satisfactory Intent**.

### **Transport Canada's response to Recommendation M08-04 (January 2020)**

Transport Canada (TC) agrees with the recommendation. TC continued the consultation with stakeholders at the November 2019 national Canadian Marine Advisory Council (CMAC) meeting on the proposed construction requirements for Phase 2 of new *Fishing Vessel Safety Regulations* (FVSR). An information paper containing all the proposed construction requirements was presented and stakeholder comments were collected through a correspondence group in the weeks following CMAC. The proposed requirements include a

performance based requirement for existing and new vessels operating in ice-covered waters. Following consideration of the comments in early 2020, the proposed regulatory requirements for construction are targeted for pre-publication in the *Canada Gazette*, Part I, in 2020.

The planned issuance of a FlagStateNet to provide guidance to inspectors on the application of the new requirements in the FVSR Phase I (specifically, that the authorized representative ensures the vessel is designed, constructed and equipped to operate safely and be seaworthy in its area of operation, in the context of vessel operating in ice-covered water) was postponed to allow for the complete proposal on construction requirements to be presented at the 2019 Fall CMAC. The FlagStateNet will now be issued in Winter 2020.

### **TSB reassessment of response to Recommendation M08-04 (March 2020)**

The Board notes that TC has consulted stakeholders regarding the proposed construction requirements for phase 2 of the new *Fishing Vessel Safety Regulations* (FVSR). TC plans to consider the comments received in early 2020 before pre-publication of phase 2 of the FVSR in the *Canada Gazette*, Part I, in 2020. The proposed requirements include a performance-based requirement for existing and new vessels operating in ice-covered waters. The Board is encouraged by the proposed performance-based requirement for existing and new vessels operating in ice-covered waters but, without more detail, it is unknown whether this requirement will be sufficient to mitigate the safety deficiency identified in this recommendation.

The Board also notes that, although TC had indicated it would give internal guidance to inspectors providing specific guidance to ensure that all fishing vessels operating in ice are structurally suited, it has not yet been issued. Finally, the Board remains concerned about the protracted delay in phase 2 of the new FVSR coming into force.

The Board considers the response to the recommendation to show **Satisfactory Intent**.

### **Next TSB action**

The TSB will monitor the implementation of the planned actions.

This deficiency file is **Active**.